

REMARKS

This application has been carefully reviewed in light of the Office Action dated March 8, 2006. Claims 1 to 3, 5 to 14, 16 to 29, 31 to 44 and 46 to 54 are pending in the application, with Claims 15, 30 and 45 having been cancelled herein. Claims 47, 48, 50, 51, 53 and 54 have been withdrawn from consideration. Of the claims currently under consideration, Claims 1, 9, 16, 24, 31, 39, 46, 49 and 52 are independent. Reconsideration and further examination are respectfully requested.

Claims 1 to 3, 5 to 7, 9 to 13, 24 to 28, 30 to 37, 39 to 43, 45, 46, 49 and 52 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,204,867 (Fujimoto) in view of U.S. Patent No. 5,283,667 (Kojima). Claims 8, 14, 23, 29, 38 and 44 were rejected under 35 U.S.C. § 103(a) over Fujimoto and Kojima in view of U.S. Patent No. 5,455,895 (Hattori). The rejections are respectfully traversed.

Referring specifically to the claims, independent Claim 1 defines an image processing apparatus. The apparatus comprises input means for inputting an image of one of a plurality of image types, and image processing means for generating a recording image data based on the input image, the image processing means being capable of generating first recording image data for recording the image on a recording material at a predetermined recording density, and second recording image data for recording the image on a recording material at a recording density lower than that of the first recording image data, by reducing the number of recording dots through decimation. The apparatus also comprises selecting means for use of an operator in selecting a recording mode from among a first recording mode, for recording the first recording image data, and a second recording mode, for recording the second recording image data, and determining means for

determining if the input image is a predetermined image type. The apparatus also comprises control means for changing to the first recording mode which does not carry out the decimation, when the input image is a color image type or a monochrome halftone image type, whereby the second recording mode which carries out the decimation for generating deterioration for image gradation as selected by the operator is canceled.

Independent Claims 16 and 31 are method and computer readable medium claims, respectively, that correspond generally to the apparatus of Claim 1.

The applied references are not seen to disclose or to suggest the features of independent Claims 1, 16 and 31, and in particular, are not seen to disclose or to suggest at least the features of an operator selecting a recording mode from among a first recording mode, for recording a first recording image data, and a second recording mode, for recording a second recording image data, determining if an input image is a predetermined image type, and changing to the first recording mode which does not carry out decimation, when the input image is a color image type or a monochrome halftone image type, whereby the second recording mode which carries out decimation for generating deterioration for image gradation as selected by the operator is canceled.

The Office Action concedes that Fujimoto does not explicitly suggest changing to the first recording mode when the second recording mode is selected by the operator and the determining means determines that the input image is a predetermined image type, wherein the second recording mode as selected by the operator is cancelled. However, the Office Action asserts that it would been obvious to combine the first and the ninth embodiments disclosed in Fujimoto, and that such a combination discloses the above feature. Applicants respectfully disagree because (1) any proposed combination of

Fujimoto's first and ninth embodiments is impermissible, and (2) even if the suggested combination of Fujimoto was permissible, the combination still would not disclose or suggest the features of independent Claims 1, 16 and 31.

Turning first to point (1) above, any proposed combination of Fujimoto's first and ninth embodiments is impermissible because the combination would obviate the function of the ninth embodiment, thus rendering the embodiment unsatisfactory for its intended purpose. (See MPEP § 2143.01(V)). In other words, any combination of Fujimoto's first and ninth embodiments would have no more functionality than the first embodiment alone. Thus, no motivation to combine the first and ninth embodiments exists.

More specifically, in Fujimoto's first embodiment a discriminating portion 31h in an image processor 31 determines the color type (color or monochrome) of an original document. (column 16, lines 61 to 65). Mirror-driving motors of laser beam scanners are controlled in accordance with the color type. (column 17, lines 15 to 18). In other words, the color type of the original is "automatically extracted," and the information is used to drive the mirror-driving motors. (column 17, lines 18 to 21). On the other hand, in Fujimoto's ninth embodiment a user determines the color type of the original document and selects either "color" or "monochrome" on control panel 38, and the mirror-driving motors are driven in accordance with the color type. (column 22, lines 42 to 58).

The Office Action contends that it would have been obvious to combine Fujimoto's first embodiment and ninth embodiment, and suggests that in such a combination the automatic selection of color/monochrome would override the manual selection of color/monochrome. However, such a combination would render the manual

selection of color/monochrome meaningless, since automatic selection of color/monochrome would always occur and would ultimately determine the selection of color/monochrome by overriding manual selection of color/monochrome if the automatic and manual selections do not match.

In other words, the Office Action's proposed combination of manual and automatic selection of the same attribute (color/monochrome) with override of the manual selection provides no more functionality than automatic selection of the attribute (color/monochrome) alone. Accordingly, no motivation to combine Fujimoto's first and ninth embodiments exists, because the functionality of the ninth embodiment would be obviated and rendered unsatisfactory for its intended purpose.

Turning now to point (2) above, even if a combination of Fujimoto's first and ninth embodiments was somehow permissible (and Applicants do not concede this), the combination still would not disclose or suggest an operator selecting a recording mode from among a first recording mode, for recording a first recording image data, and a second recording mode, for recording a second recording image data, determining if an input image is a predetermined image type, and changing to the first recording mode which does not carry out decimation, when the input image is a color image type or a monochrome halftone image type, whereby the second recording mode which carries out decimation for generating deterioration for image gradation as selected by the operator is canceled.

Specifically, while the proposed combination might disclose manual and automatic selection of the same attribute (color/monochrome), the proposed combination does not disclose or suggest operator selection of (A) a recording mode, for recording a first recording image data, and a second recording mode, for recording a second recording

image data, and determining if an input image is (B) a predetermined image type. In particular, (A) and (B) above are different, whereas the proposed combination of Fujimoto discloses automatic and manual selection of the same attribute (color/monochrome). Accordingly, the proposed combination of Fujimoto is not seen to disclose or to suggest the above feature, much less disclose or suggest changing to the first recording mode which does not carry out decimation, when the input image is a color image type or a monochrome halftone image type, whereby the second recording mode which carries out decimation for generating deterioration for image gradation as selected by the operator is canceled.

The remaining references, namely Kojima and Hattori, are not seen to cure the deficiencies of Fujimoto, either alone or in combination. Accordingly, independent Claims 1, 16 and 31 are believed to be allowable.

Independent Claim 9 defines an image processing apparatus. The apparatus comprises input means for inputting an image of one of a plurality of image types, and image processing means for generating recording image data based on the input image, the image processing means being capable of generating first recording image data for unconditionally decimating the image data, and second recording image data for conditionally decimating the image data. The apparatus also comprises selecting means for use of an operator in selecting a recording mode from among a first recording mode, for recording the first recording image data on a recording material, a second recording mode, for recording the second recording image data on the recording material, and a third recording mode, for recording third recording image data on the recording material, the third image data being obtained from the input image without decimating the image. The

apparatus also comprises determining means for determining if the input image is a predetermined image type, and control means for changing to the third recording mode which carries out neither unconditional nor conditional decimation, when the input image is a monochrome halftone image type, whereby the first recording mode which carries out unconditional decimation as selected by the operator is canceled.

Independent Claims 24 and 39 are method and computer readable medium claims, respectively, that correspond generally to the apparatus of Claim 9.

In entering rejections of Claims 9, 24 and 39, the Office Action relies on the proposed combination of Fujimoto's first and ninth embodiments. For the reasons discussed above, Applicants contend that such a combination of Fujimoto is improper. In addition, for reasons similar to those discussed above Applicants submit that even if such a combination were permissible the combination still would not disclose or suggest the features of an operator selecting a recording mode from among a first recording mode, for recording a first recording image data on a recording material, a second recording mode, for recording a second recording image data on the recording material, and a third recording mode, for recording third recording image data on the recording material, the third image data being obtained from the input image without decimating the image, determining if an input image is a predetermined image type, and changing to the third recording mode which carries out neither unconditional nor conditional decimation, when the input image is a monochrome halftone image type, whereby the first recording mode which carries out unconditional decimation as selected by the operator is canceled.

The remaining references, either alone or in combination, are not seen to cure the deficiencies of the proposed Fujimoto combination. Accordingly, independent Claims 9, 24 and 39 are believed to be allowable.

Independent Claim 46 defines an image processing apparatus. The apparatus comprises input means for inputting an image that is a color image or a monochrome image, and image processing means for generating a recording image data based on the input image, the image processing means being capable of generating first recording image data for recording the image on a recording material at a predetermined recording density, and of generating second recording image data for recording the image on a recording material at a recording density lower than that of the first recording image data, by reducing the number of recording dots through decimation. The apparatus also comprises selecting means for use of an operator in selecting a recording mode from among a normal recording mode, for recording the first recording image data, and a decimation recording mode, for recording the second recording image data, and determining means for determining if the input image is a color image or a monochrome image. The apparatus also comprises control means for changing to the normal recording mode, when the decimation recording mode is selected by the selecting means and the determining means determines that the input image is a color image whereby the recording mode selected by the operator is canceled.

Independent Claims 49 and 52 are method and computer readable medium claims, respectively, that correspond generally to the apparatus of Claim 46.

In entering rejections of Claims 46, 49 and 52, the Office Action relies on the proposed combination of Fujimoto's first and ninth embodiments. For the reasons

discussed above, Applicants contend that such a combination of Fujimoto is improper. In addition, for reasons similar to those discussed above Applicants submit that even if such a combination were permissible the combination still would not disclose or suggest the features of an operator selecting a recording mode from among a normal recording mode, for recording a first recording image data, and a decimation recording mode, for recording a second recording image data, determining if an input image is a color image or a monochrome image, and changing to the normal recording mode, when the decimation recording mode is selected and the determining determines that the input image is a color image whereby the recording mode selected by the operator is canceled.

The remaining references, either alone or in combination, are not seen to cure the deficiencies of the proposed Fujimoto combination. Accordingly, independent Claims 46, 49 and 52 are believed to be allowable.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Frank L. Cire', with a stylized flourish extending to the right.

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